IN THE UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF TENNESSEE
NASHVILLE DIVISION

ROBERT BUMGARDNER, *et ux*,	)	
	)	
Plaintiffs,	)	
	)	
	)	CIVIL NO. 3:07-0218
	)	JUDGE HAYNES
UNITED STATES OF AMERICA,	)	
	)	
Defendant.	)	

M E M O R A N D U M

Plaintiffs, Robert and Reita Bumgardner, filed this action under the Federal Tort Claims Act, ("FTCA") 28 U.S.C. §§ 2401, et seq., against the Defendant, the United States, asserting claims of medical malpractice and a loss of consortium arising out of Plaintiff Robert Bumgardner's medical treatment at the Veterans Administration ("VA") hospital in Nashville. Plaintiff Robert Bumgardner, alleges that he suffered an occult fracture at the T9, 10 level of his thoracic spine that was undiagnosed and untreated despite multiple visits to the VA hospital for pain. Plaintiff Robert Bumgardner's specific claims are that the attending VA physicians were negligent in failing to order a Computerized Tomography ("CT") scan or Magnetic Resonance Imagery ("MRI") that would have revealed the occult fracture at the T9, 10 level of his thoracic spine and were negligent in failing to consult an orthopedic spine surgeon or neurosurgeon. According to Plaintiff, VA physicians failed to adhere to the standard of care for internists and emergency room physicians in Nashville in February 2006, and such omissions caused Plaintiff Robert Bumgardner's permanent paralysis and Plaintiff Reita Bumgardner's loss of consortium.

After completion of discovery and denial of the Defendant's motion for summary judgment, a bench trial was held. After that hearing, the parties submitted their extensive

proposed findings of fact and conclusion of law. Set forth below are the Court's findings of fact and conclusions of law pursuant to Fed. R. Civ. P. 52.

A. Findings of Fact

Plaintiffs Robert and Reita Bumgardner were married in 1970. Robert Bumgardner, who is now 62 years old, was in the United States Marines and injured his back after being thrown onto a jeep by an explosion. In 1987 while in Naples, Italy, a Naval doctor diagnosed Bumgardner's back condition as ankylosing spondylitis ("AS"), a genetic disease. At the time of his discharge, Bumgardner received disability payments for his exposure to Agent Orange in Vietnam, but not for his back injury. Bumgardner was slightly under 5 feet, 8 inches at the time of the diagnosis, but his height was later reduced through stooping to 5 feet, 4 inches.

AS is an inflammatory disease that involves primarily the bones of the spine and pelvis that over time calcify the ligaments and the vertebral bones become brittle. AS can cause a deformed spine with ossification of the ligaments and the spine, resulting ultimately in the fusion of the spine. The soft tissues in the spine, discs and ligaments calcify and become bone so that the entire spine is fused solid. A person suffering from AS can sustain a fractured vertebra from minor trauma. AS patients are at more risk to sustain vertebral fractures than other persons.

The Bumgardners are teachers and Robert Bumgardner taught his classes sitting down. During this time, Bumgardner hired someone to assist him in dressing in the morning, and a fellow teacher assisted him in trips to the commissary. In 1997, Bumgardner fell at school and further injured his back. Bumgardner later took disability retirement from teaching. Mrs. Bumgardner continued to teach in Italy, but Bumgardner did not work after his fall in 1997. In 2003, the Bumgardners moved to Clarksville, Tennessee to be near their grandchildren.

In January 2004, Bumgardner was hospitalized at the Nashville VA Hospital for profound systemic anemia and an ulcer. Bumgardner's medication caused him to lose blood and become anemic. For an extended time, Bumgardner experienced increasing problems with pain control and his new pain medication. Bumgardner also received treatment for his AS and chronic back pain that he rated a "7" on a scale of "10," with greater pain at times. For his condition, VA physicians prescribed a number of medications, including Clonazepam, Keppra, Klonopin, Flexeril and Valium. Bumgardner often complained that the medications caused his depression and increased his falling. Bumgardner did not always take his medications.

On February 12, 2004, Bumgardner reported to VA physicians that his pain was at best 8/10, worst 10/10." (Collective Exhibit No. 1, VAMC Medical Record at 1894). Bumgardner's medical record reflects that "[f]unctionally, he has declined to the point that his wife must assist him with toileting and must bathe him" and Bumgardner had "significant depression" affecting his ability to perform daily living activities. Id.

In August 2004, Bumgardner reported muscle spasms for which a VA rheumatologist referred him to a neurologist. Bumgardner's episodic back "spasms" lasted 10 to 15 minutes or longer. For the latter condition, VA physicians prescribed Vioxx, Celebrex, Indocin, and narcotics as well as Etanercept injections that improved his condition. VA physicians also recommended a walker and later a wheelchair, as needed. VA physicians opined that Bumgardner "would probably need" the wheelchair, but Bumgardner "really hated that thing." (Trial Transcript at 235). Mrs. Bumgardner and Josh Peterson, a neighbor, characterized Bumgardner as an "old Marine" who would endure his pain without complaint and refused to apply for a handicapped placard for his vehicle. Bumgardner preferred to walk than use a

wheelchair.

On August 27, 2004, Bumgardner told a VA nurse of sharp right abdominal pain that he had had for less than two weeks. Two hours later, Bumgardner reported spasms in his back causing a sharp pain from his abdomen through to his kidney and his spine. In October 2004, a urologist reviewed a CT scan of Bumgardner. On October 25, 2004, a neurologist examined Bumgardner for his muscle spasms, including a jerking of his bilateral extremities. During this time, Bumgardner used a walker.

By January 21, 2005, Bumgardner told a VA rheumatologist that his back pain had "much improved on Enbrel," but his leg spasticity remained. (Joint Exhibit 1, Volume 3, April 13, 2005, Psychology Group Therapy Progress Note at 1791). On March 14, 2005, Bumgardner's neurologist changed his medications for his leg spasms, but by this time, Bumgardner was in a wheelchair. Bumgardner came to his April 13, 2005 therapy session using a walker and informed the group that he was "never getting back in that thing," *i.e.*, his wheelchair. Id. at 1762. In May until June 2005, Bumgardner traveled to Italy, but after his return on July 18, 2005, Bumgardner complained to the VA neurologist that his leg spasm medication was not working and depressed him. The neurologist prescribed Valium for Bumgardner's spasms. (Exhibit 1, Volume 3, July 18, 2005 Neurology Follow-Up Progress Note at 1737-1739).

On September 27, 2005 during a follow-up appointment with his VA neurologist, Bumgardner reported that he "was doing well on Enbrel and has notic[e]d improved function, rom [range of motion] and decreased since starting this therapy." (Exhibit 1, Volume 3, September 27, 2005 Neurology Progress Note at 1719). In addition, Valium significantly improved his sleep and his wife reported that his jerking and thrashing movements in his

extremities ceased. On October 19, 2005, Dr. Robin Lapre evaluated Bumgardner and noted that Bumgardner "had good response to Enbrel, although has chronic low back pain, uses hydrocodone." (Exhibit 1, Volume 3, October 19, 2005 Primary Care - New Visit Progress Note, at 1698, 1700). At this time, Bumgardner was using a walker.

On February 10, 2006, Bumgardner who has a history of falls and instability, lost his balance and fell. Id. at 1683. On his February 10, 2006 visit, Bumgardner reported to his VA rheumatologist "no significant changes overall," but stated his physical therapy with daily exercises yielded "some baseline back pain." (Exhibit 1, Volume 3, February 10, 2006, Rheumatology Progress Note, at 1683). Before February 14, 2006, Bumgardner had recovered from his internal bleeding and his medications controlled his back pain. Id. Bumgardner no longer suffered from the involuntary leg jerking and spasms. Bumgardner described Enbrel as making "a world of difference," (Trial Transcript at 40), enabling him to "loosen up faster" or "move" and providing better pain control. Id.

1. Bumgardner's February 14, 2006 Visit

Of his multiple visits giving rise to his claims, Bumgardner's first was on February 14, 2006, after Bumgardner drove to visit a friend. At his friend's residence, Bumgardner used his cane, but when he walked upstairs to see a door, Bumgardner "hung" his foot and fell face forward, hitting his face on a chair. Bumgardner "heard a bunch of cracking" in his back and was concerned about a spinal injury or fracture. (Collective Exhibit 1, VAMC Medical Record at 1678). Bumgardner and his wife went to the VA hospital.

The triage nurse rated Bumgardner's acuity level "4", or non-urgent. Id. at 1680. The VA emergency room nurse's assessment progress note for Bumgardner on February 14, 2006

visit states, in pertinent part:

> "Chief Concern: Tripped over rug tonight and fell face forward. Concerned that he "heard a bunch of cracking" in back, history of Ankylosing Spondylitis, having pain in thoracic spine, far left down flank.
>
> * * *
>
> Arrival mode: wheelchair
>
> Pain intensity: 9(02/14/2006 20:28)
>
> Onset: New - - Started this evening."
>
> Loss of Appetite: No

(Exhibit 1, Volume 3, February 14, 2006 ER Nursing Assessment Progress Note at 1673, 1680).

Dr. Wesley Shealey, an internist, was the attending physician and his treatment notes reflect, in pertinent part, as follows:

> "cc "Fell on rug."
>
> HPI:
>
> > 59 yo male who reports hx of ank spon fell tonight on rug, hit back and has some pain now and concerned about poss. spinal injury/fracture. Some generalized tenderness over back. (says usually has some)
> >
> > * * *
>
> PHYSICAL EXAMINATION
>
> > ABD: soft/nt/nd/ba nl
> > MS: mild general tenderness to palpation over back
>
> **X-ray t-spine and L spine: viewed by Vandy rad on call: report from last VA film 4/05 read to radiologist and she relayed that prior dictated report described the same findings that she sees on his current film. no other new fractures or acute changes noted**
>
> IMPRESSION PLAN:

> **Back pain: Difficult to delineate new vs old pain in this pt. plain films do not seem to indicate any new fracture.** pt is reassured with this info and plans to continue to take his current pain meds and mm relaxants and monitor closely for next few days. will return if changes, new problems or no improvement."

(Joint Exhibit 1, Volume 3, February 15, 2006 ER Attending Progress Note at 1675-1677 (emphasis added)).

Dr. Shealey did not recall reading the triage nurse's note before his examination of Bumgardner, but relied on his observations, notes and Bumgardner's medical history as well as Bumgardner's answers to his questions. Dr. Shealey testified that Bumgardner told him that he "usually has pain in his back all the time." (Trial Transcript at 587). Dr. Shealey found Bumgardner to be otherwise oriented and offered to change or increase Bumgardner's pain medication, but Bumgardner declined. As noted, on the February 14th visit, Dr. Shealey ordered x-rays of Bumgardner's thoracic and lumbar spine and compared those x-rays to earlier x-rays of Bumgardner's spine in April 2005. The April 11, 2005 x-ray revealed a severe fracture at the T11/T12 level of the thoracic spine, and the February 14, 2006 x-ray also showed that fracture at the T11/T12 area that was not acute. Id. at 1615-16. Thus, Dr. Shealey opined no new fracture on February 14, 2006.

Dr. Shealey also forwarded the April 2005 and February 14, 2006 x-rays to a radiologist at the Vanderbilt University Medical Center ("VUMC") for review. The VUMC radiologist did not discern any new fracture on February 14, 2006. Id. at 1614-1617, 1676-1677. Dr. Carol Stephenson, a board-certified radiologist at VUMC, reviewed the February 14, 2006 x-rays in digital form. After her review of the nine separate images of Bumgardner's thoracic and lumbar spine, Dr. Stephenson found "poor technique" and "poor visualization" of the upper thoracic spine due to his heavy set physique. (Transcript at 669). Yet, Dr. Stephenson found the x-rays of

the T9 through T10 "adequate[]" and "sufficient" for her diagnosis. Id. at 670. Dr. Stephenson deemed comparison of prior x-ray and measurements of the height in the vertebral bodies x-rays sufficient to diagnose fractures in AS patients. Dr. Stephenson explained that the lack of "decreased height" in the vertebral body is evidence that a fracture was not present. Id. at 680. Dr. Stephenson also noted an old healing fracture at T11-12, but did not find new fracture after a second viewing. In sum, Dr. Stephenson found "no change" between the April 2005 x-rays and the February 14, 2006 x-rays of Bumgardner's spine and so reported to Dr. Shealey.

Dr. Shealey informed Bumgardner of the absence of any new fracture and instructed him to continue his current regimen of pain medications and muscle relaxants and to return to his primary care physician if his condition did not improve. (Joint Exhibit No. 1, Volume 3 at 1677). The medical records reflect that the Bumgardners left the VA at approximately 3:00 a.m. on February 15, 2006. Id. at 1674.

2. Bumgardner's February 21st Visit

Bumgardner's second VA visit for his pain was on February 21, 2006. Mrs. Bumgardner informed the nurse of her husband's weakness, not eating and disorientation since his February 14, 2006 fall. Mrs. Bumgardner also reported that her husband had not had a bowel movement since February 13, 2006, despite four enemas. Id. at 1663.

The VA's nurse's screening note reflects that this visit began at 9:53 a.m., with Bumgardner's rating his pain level at 7 and reads, in pertinent part, that:

> CHIEF COMPLAINT: Pt. fell 2/15/06 and was evaluated in ER for same. Returns today with cont. soreness in lt mid-axillary region and across abdomen, esp. RUQ.[1] …

[1]"RUQ" means the right upper quadrant of the abdomen.

Please re-eval cont. aching post fall.

(Exhibit 1, Volume 3 at 1673). By 10:03 a.m., Sharon Gibbon, a nurse, recorded Bumgardner's pain as an "8" on a scale of 10, with burning, cramping, soreness with an "Onset/Duration" of less than two weeks. Id. at 1672.

Dr. Suzanne Murff, a board certified internist at the VA since 2003, was Bumgardner's primary care physician at the Nashville VA Hospital and treats veterans who have back pain. Dr. Murff examined Bumgardner at 10:15 a.m. and her notes reflect, in pertinent part, that:

> "59 y/o white male for walk in eval. Pt with c/o fall 2 d ago. States he tripped over a rug at a friends house. Pt states he was seen in ER on 2-14 after a prior fall. Since that time pain in mid-back, + radiating around front of chest. Sxs worse with certain positions, such as bending over. Pt. using hydrocodone with incomplete relief.
>
> * * *
>
> [Physical Exam]
>
> Chest CAT B
> CVS RRR no m/c/r
> Ext no c/c/e, **strength 5/5**
>
> * * *
>
> A/P: 59M for walk in eval
>
> 1) **Back pain: + compression fracture in mid thoracic region, consistent with sxs. Not new fracture**
> **- Neuro intact**
> - change hydrocodone to 10 5 times a day and add MS Contin 15 bid for pain
> - inc docusate and senna
> - arrange bone density
> - encourage use of walker at ALL times

Id. at 1668, 1669, 1670.

During her examination, Dr. Murff asked Bumgardner to lift each of his legs and arms

against her resistance that revealed both sides were rated 5 or normal.[2] Plaintiffs note that Dr. Murff did not palpate Mr. Bumgardner's spine or put pressure on his spine at the T9, T10 level. (Transcript at 531). On Bumgardner's February 21st visit, Dr. Murff found Bumgardner to be coherent and able to tell his entire history as well as answer her questions fully without any acute distress. Bumgardner was uncomfortable, but was able to access the examining table and return into his chair with "minimal assistance". Dr. Murff explained that narcotics for pain control, including morphine, are common causes of constipation for which that laxatives and stool softeners are prescribed. Mrs. Bumgardner told Dr. Murff that Bumgardner's four enemas were not "unusual." Id. at 517.

Dr. Murff also performed a rectal examination and found Bumgardner's rectal tone to be normal, that was inconsistent with any neurological impairment of his spine. Dr. Murff considered the rectal examination a "neurological type finding," (Transcript at 515), and also deemed Bumgardner's ability to get onto the examination table to be inconsistent with any neurological impairment.

> "So I stood behind him, his wife stood on the side. He climbed onto the table. We laid him back. I did the exam. Or he laid back, I did the exam. He rolled over. I did the rectal exam at that time. And we got him up and put him back into the chair. I mean, he got up and got back in the chair."

Id. at 514.

Mrs. Bumgardner testified that her husband refused to get on the examining table, and that a rectal examination was performed with Bumgardner leaning over the table. (Transcript at pp. 67, 68). Dr. Murff earlier gave Bumgardner an abdominal examination on February 14, 2006

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[2]This finding in the medical record is by the notation "strength 5/5," quoted above Exhibit 1, Volume 3 at 1669.

while he was in a wheelchair. (Exhibit 1, Volume 3, 2/14/06 ER Attending Note at 1676 and Transcript at 589, 590). Regardless of location, there is no dispute that the rectal examination occurred and the Bumgardners do not offer expert proof that a normal rectal tone is inconsistent with the presence of a neurological impairment, as Dr. Murff testified. In Dr. Murff's experience, a neurological impairment from the spinal cord would likely result in little or no sphincter resistence and bowel incontinence.

On the February 21st visit, Dr. Murff considered the possibility of a new fracture and explained that any patient "who comes in with pain and a fall, the first thing to rule out would be a fracture." Id. at 527. Dr. Murff was aware that Bumgardner's "very functional limitations of his spine due to his AS." Id. at 504-506. Dr. Murff stated radiating pain around Bumgardner's chest could be a neurological sign of a new fracture, but noted Bumgardner's regular treatment by a rheumatologist for his AS. Dr. Murff also reviewed the February 14, 2006 x-rays and notes, the April 2005 x-ray report and Dr. Shealey's conclusions. Dr. Murff also relied on the radiologist's interpretation of films comparing the April 2005 and February 14, 2006 x-rays. Dr. Murff concluded that Bumgardner had not suffered a new fracture on February 14, 2006. Dr. Murff found Bumgardner's pain around the mid chest region to be a manifestation of his constipation and his increasing pain with motion to be consistent with an exacerbation of his old fracture at T11/T12. Dr. Murff did not change Bumgardner's medication.

Dr. Murff discussed with Bumgardner his history of falls and noted a physical therapy evaluation on the reasons for his falls. Id. at 494-495, 507-508. Dr. Murff encouraged Bumgardner to "use his walker at ALL times." (Collective Exhibit 1, VAMC Medical Record, at 1670) (emphasis in original)). Dr. Murff informed Bumgardner of his high risk for falls, and

"talked about ways to decrease his risk for falls and using a walker with him was the plan for him to do that." (Trial Transcript at 494-495, 507-508). Dr. Murff also prescribed long-acting morphine for Bumgardner's pain. Id. at 495-496. Bumgardner reported "some relief" with the medication and after a bowel movement at the VA clinic, he reported his pain was "much imp[ro]ved." (Collective Exhibit 1, VAMC Medical Record at 1663). The latter fact supports Dr. Murff's assessment that Bumgardner's abdominal pain was not due to a new fracture.

3. Bumgardner's February 28th Visits

After his February 21, 2006 visit, Bumgardner's pain worsened causing him to request his pain medication early. Bumgardner also needed assistance to use the bathroom and clean himself up. Mrs. Bumgardner dressed her husband. On February 28th, Bumgardner's legs collapsed while using the walker. Josh Peterson, a guest, caught Bumgardner "halfway down" and with Mrs. Bumgardner's assistance, returned Bumgardner to a standing position and then to his chair. Bumgardner was in extreme pain and Mrs. Bumgardner got her husband to bed.

Mrs. Bumgardner decided to take her husband to the Nashville VA Emergency Room because "he was hurting more," hallucinating, not eating, and drinking only to take his medicine. (Transcript at 58). Given his weakness and shaking, Mrs. Bumgardner drove their automobile onto their lawn perpendicular to the front steps. After removing the walker, Mrs. Bumgardner assisted her husband on each step by turning him sideways and grabbing the railing with her behind him. At ground level, Mrs. Bumgardner opened the car door for husband to enter.

At 10:32 a.m. on February 28th, Marsha Joy, the emergency room nurse, saw Bumgardner and recorded, in pertinent part, as follows:

> CHIEF COMPLAINT: **Cont. c/o pain in his mid back and abd. States the pain has gotten worse since his last visit.** States he almost fell yesterday states

someone grabbed him from behind to keep him from falling. Wife states he is weak and not eating.

Wife states pt. is disoriented since his fall on 2/14/06. States he is not sure when he had his last BM. Thinks it may have been 2/13/06. Wife gave patient enema this morning but states he did not have BM but some bright red bleeding on the tissue. Oriented as to place, time and person. Please evaluate.

(Exhibit 1, Volume 3, 2/28/06 Nurse Screening Progress Note at 1667) (emphasis added). Mrs. Bumgardner remained with her husband.

The Bumgardners next saw Dr. Murff. Mrs. Bumgardner told Dr. Murff of her husband's worsening back pain and increased requests for more medication as well as his lack of bowel movement. At the hospital, Bumgardner had a bowel movement and his legs gave way, but Mrs. Bumgardner was able to get him into a wheelchair. Mrs. Bumgardner also reported the bathroom incident to Dr. Murff.

Dr. Murff recorded her notes on Bumgardner's first February 28th visit at 12:31 p.m., and those notes read, in pertinent part, as follows:

"59 yo WHITE MALE for walk in eval. PT is accompanied by wife. **PT with c/o abd pain/constipation**, feels weak, no appetite. PT staes [sic] soem [sic] relelf [sic] with MS Cotnin as for pain, but now has had no BM since 2/13. Pt using senna and colace with no relief. Pt with chronic constipation, but worse recently. Denies fever, nause [sic] no vomiting. Pt's wife has given him 4 enemas with **good BM while in clinic. After BM, sxs of bloating and pain much improved.**

* * *

[Physical Examination]

Abd soft NT ND + BS
Rectal g neg brown soft stool

* * *

A/P: 59 M with constipation

* * *

1) GI: Enema worked while pt in clinic. No impaction on exam
- add lactulose to senna and colace
- check labs today
2) pain: no change in meds at present, call if pain persists after constipation resolves

(Exhibit 1, Volume 3, 2/28/06 Clinic Visit Progress Note at 1663-1666).

Dr. Murff's diagnosis was chronic constipation, but she ordered laboratory tests for Bumgardner. Dr. Murff also examined Bumgardner's abdomen finding "no pain on the abdominal exam." (Transcript at 519). Dr. Murff explained that she was "comfortable" with the X-ray report of February 14, 2006. Id. at 539. Dr. Murff's Progress Note for February 28, 2006 states the dates and pain levels for Bumgardner as follows:

	PAIN
2/28/06 @ 1044	8
2/21/06 @ 0956	8
2/21/06 @ 0946	7

(Exhibit 1, Volume 3, Clinic Visit Progress Note at 1663).

On his February 28, 2006 visit, Bumgardner told Dr. Murff his abdominal pain was his "main complaint," but after a bowel movement his abdominal pain resolved. Id. at pp. 516, 523. Dr. Murff's concern on February 28th was Bumgardner's abdominal symptoms that were his principal complaint that day. Id. at 561. Dr. Murff did not observe any symptoms that changed her conclusion from her February 21st examination that Bumgardner had not suffered a new fracture. (Trial Transcript at 525, 527). When they discussed his back pain on February 28, Bumgardner told Dr. Murff that it had improved, and she saw "no alarm symptoms of neurological compromise." Id. at 527. Specifically, Dr. Murff testified that Bumgardner's normal rectal tone and his ability to climb up and down on an examination table with no

difficulty indicated to her that he "was neurologically intact on the 28th." Id. Dr. Murff prescribed MS Contin, a long-acting morphine, to get Bumgardner's pain level down from "seven, or eight or nine to five or six or seven." Id. at 496.

Plaintiffs note that Dr. Murff signed Bumgardner's medical record at 12:36 p.m , four minutes and 14 seconds after she opened it. (Exhibit 1, Volume 3, 2/28/06 Clinic Visit Progress Note, compare Entry Date of Feb. 28, 2006 at 1663 with 02/28/06 at 1666). Dr. Murff estimates that she spent "at least 30 minutes" with Bumgardner on February 28th, and explains that the six minutes represents the amount of time necessary to record her notes on the medical chart. (Transcript at 525).

Given Bumgardner's complaints on February 28, 2006 of worsening pain, leg weakness, history of falling, and lack of eating, Plaintiffs assert that Dr. Murff ignored Bumgardner's symptoms of his continued pain since the last visit and that Dr. Murff failed to reevaluate her February 21, 2006 diagnosis of Bumgardner's back condition. Plaintiffs cite as negligence Dr. Murff's failure on February 28th to order a full neurological evaluation by a CT scan or a consultation with an orthopedic spine surgeon or a neurosurgeon.

Dr. Murff testified at trial that on February 21st, "her neurological exam was still normal. [Bumgardner] wasn't neurologically more debilitated," (Transcript at 561), and that on February 28, 2006, she examined his rectum and found his rectal tone to be "normal." (Exhibit 1, Volume 3, Clinic Visit Progress Note, p. 1664; Transcript at 514).

After the initial February 28th visit, the Bumgardners returned home, but Dr. Murff later telephoned to inform them that the laboratory results revealed Bumgardner had severe dehydration requiring Bumgardner's admission to the hospital. Dr. Murff found an abnormality

in that Bumgardner's creatinine level had increased from 1.5 to 2.3 with a high blood count that were symptoms of dehydration. Dr. Murff's concern was "there was something going on in his abdomen," and instructed Bumgardner to return for further evaluation. (Collective Exhibit 1, VAMC Medical Record at 1660, 1666). Bumgardner became agitated during this trip. Upon arrival, Mrs. Bumgardner informed that staff that she did not want her husband to be given morphine, but he was ready for his pain medication.

On Bumgardner's second February 28th visit, the emergency room's nursing assessment note for the second visit on February 28, 2006, visits reads, in pertinent part, that:

> "Chief Concern: 59 y/o wm presents post receiving a call from his PCP and stating he was dehydrated and needed to [sic] admitted to the hospital."
>
> Informant Source:
> Family/S.O
>
> **Pain Intensity**: **9** (02/28/06 18:03)
> **Location/Radiation: Back**
>
> **ACUITY LEVEL: 3**
> Key: … **3 = Urgent** 4 = Non Urgent 5 = Non Urgent

(Exhibit 1, Volume 3. 2/28/06 ER Nursing Assessment at 1660-1662) (emphasis added)).

Dr. Christopher Wells, a second year resident and Dr. Christopher Ellis, his supervisor who is board certified in internal medicine and cardiovascular medicine, were the physicians on duty during Bumgardner's second February 28th visit. Dr. Wells's progress note for this visit signed by both physicians states, in pertinent part, as follows:

> CC: I was told to come in
>
> HPI: This is a 59 yo WM with pmh of ankylosing spondylitis, CRI, bladder ca/sp TURPT who presents after seeing his PCP earlier today with complaints of not having a bowel movement. From the note, this apparently resolved after 4 enemas. Per that note, lab review showed elevation in his creatinine and she

wanted him to return to triage for eval. **She mentions abdominal pain but at this time he denies any abdominal pain, nausea, vomiting. He has some chronic back pain with his ank spondylitis which he takes hydrocodone prn.** He denies any dizziness, loc, headache, cp, sob, pleuritic pain, lower extremity edema. **He notes he fell twice in past two weeks but did not lose consciousness. He states he slipped on some water on his tile floor.**

* * *

Vitals

Date/Time	Temp	Pulse	Resp	BP	Pain	Weight
2/28/06	97.4	…		…	9	

[Physical Examination]

GEN: nad, slightly diaphoretic
ABD: soft nt/nd bs+ -hsm
NEURO **cn ii-xii, grossly intact**

* * *

A/P: 55 yo with pmh of ankylosing spondylitis, CRI, bladder ca sp, TURPT presenting with hypotension, acute on chronic renal failure, and dehydration. He is otherwise asymptomatic. We will attempt to fluid resuscitate. Will defer further management to Night Attending.

Patient discussed with Dr. Ellis, Triage Attending, who agrees with this plan.

Following 2 liter Normal saline, Creat down to 2.1, Ca2+ down to 9.4. No beds available at NA-VA, patient and wife not interested in transfer to MU at this time. Will encourage po intake and follow up with PCC for repeat labs when acute illness resolves.

(Exhibit 1, Volume 3, 2/28/06 ER Resident Note at 1656-1658). Dr. Wells did not recall seeing Bumgardner beyond what is recorded in his note.

Dr. Wells asked Bumgardner why he had come to the emergency room that night, and Bumgardner replied that he had been "told to come in." (Transcript at 372). Dr. Wells reviewed the clinical notes from earlier that day, as well as Bumgardner's medical history, and noted that Dr. Murff had wanted him evaluated further after testing that showed Bumgardner's creatinine to

be elevated. Id. at 373. Dr. Wells discussed Bumgardner's pain and Bumgardner reported that his back pain was "chronic," that Dr. Wells interpreted as "he has always been dealing with," pain and "that there is no change in that pain." Id. at 408-409. When Dr. Wells ask Bumgardner whether his back pain was "any different," Bumgardner replied, "no." Id. at 411. After his review of Dr. Murff's 2/28/06 Clinical Progress Note and examination, Dr. Wells opined that Bumgardner did not have abdominal pain, but back pain.

Plaintiffs cite the nurse's screening note that lists Bumgardner's chief complaint as "Cont. c/o pain in his midback and abd. States pain has gotten worse since his last visit." Id. at 404, 405. Dr. Wells did not read the nurse screening progress note that was available to him. Id. at 405. Dr. Wells's "very brief" neurological examination was only of Bumgardner's face, eyes and tongue, that were neurologically intact. Id. at 388, 389, 409. Dr. Wells' notes do not reflect that Mr. Bumgardner mentioned radiating pain and Dr. Wells testified that if Bumgardner had mentioned radiating pain, he would have recorded that response. Id. at 414. Dr. Wells noted that Bumgardner was in "no acute distress," "slightly perspiring" and was "slightly diaphoretic." Id. at 383.

When asked to reconcile the triage nurse's rating of a "nine" for Bumgardner's pain with his notation of "no acute distress," Dr. Wells responded that he was not present when the "nine" was recorded, but that "when I met him and took my assessment and made my exam, I would characterize him as being in not any acute distress." Id. at 383. Dr. Wells testified that he would expect someone who was experiencing pain at a "nine" would be "physically showing signs," that he did not observe with Bumgardner. Id. at 383, 401. Dr. Wells found Bumgardner to be dehydrated, but "otherwise asymptomatic," and ordered fluids to be administered. Id. at 391-

392; Joint Exhibit 1, VAMC Medical Record, p. 1658. After Dr. Wells evaluated Bumgardner, he discussed his evaluation with Dr. Ellis, who agreed with his treatment plan. Dr. Wells electronically signed his notes at approximately 10:28 p.m., and left Bumgardner in Dr. Ellis' care.

Plaintiffs note that at that time, Dr. Wells a second year resident did not know that AS patients were susceptible to fractures because of their fragile spine nor any serious complications of AS. (Transcript at 406-07). Dr. Wells admitted that an AS patient with a pain level of 9 could represent spinal instability "if the patient told me that it was a 9." Id. at 410-11. Dr. Wells never asked Bumgardner to rate his pain level. Id. at 411.

Dr. Ellis was in charge of the VA's emergency room on February 28th and when Dr. Ellis first saw Bumgardner, he was not "in an acute illness, his vital signs were stable," and "his neurological exam was grossly intact." Id. at 424. Dr. Ellis observed Bumgardner to be alert and oriented. Id. at 424. Based upon his own examination, Dr. Ellis found that Bumgardner was not in severe pain, and checked his extremities for weakness. Id. at 425. Dr. Ellis discussed with Bumgardner his chronic back pain and his medications and recalled that "as the night wore on, he was there long enough that some of his . . . pain control had kind of worn off and he requested that we give him his pain medication, which we did just before he left." Id. at 426-427. Dr. Ellis also reviewed Dr. Murff's clinical notes from earlier in the day, as well as Dr. Shealey's notes of February 14, and the radiology report from that date. Id. at 430-431. Dr. Ellis observed nothing in the prior clinical notes nor from his examination of Bumgardner that suggested the possibility of a new fracture. Id. at 434.

In Dr. Ellis's opinion, Bumgardner appeared "much older than his age," and obviously

had a chronic, significant illness, but was mentally normal. Id. at 429. Bumgardner did not comment about radiating pain to Dr. Ellis, and Dr. Ellis testified that if Bumgardner had reported radiating pain, then he would have recorded that complaint in his treatment notes. Id. Bumgardner told Dr. Ellis that he "felt better." Id. at 424. Dr. Ellis explained that other than the dehydration, that had been treated, Dr. Ellis did not discern any other acute illness to warrant further treatment or hospitalization. Dr. Ellis testified that if Bumgardner had come to the emergency room that evening with a "discrete abrupt worsening in chronic back pain," he "certainly" would have done a "more thorough evaluation of his neurological status." Id. at 446-447. Bumgardner, however, reported to Dr. Ellis that his chronic back pain was no greater than usual for him on that day. Id. at 457. Plaintiffs note that Dr. Ellis was unaware that x-rays films may not identify certain spinal fractures such as an occult fracture or a nondisplaced fracture in AS patients.

Dr. Ellis also told Bumgardner that "if he felt up to going home that would be okay," because he did not discern an acute medical illness to warrant hospitalization. Id. at p. 426. Dr. Ellis also mentioned that "if [Bumgardner] felt uncomfortable going home," Bumgardner could be kept in the hospital, but at the time, there were not any beds available in the Nashville VA Hospital. (Joint Exhibit 1, Volume 3, ER Resident Progress Note at 1858). Dr. Ellis found an available bed at the VA's Murfreesboro facility, and offered to have Bumgardner "transferred to the hospital in Murfreesboro for continued evaluation." (Transcript at 427). According to Dr. Ellis, the Bumgardners were not interested in this transfer and "seemed like they were okay with" returning home with continuing fluid and to call back, if Bumgardner's condition worsened. (Joint Exhibit No. 1, VAMC Medical Record at 1658).

After "a long while," at the hospital, Mrs. Bumgardner saw her husband in pain, sweating and cursing. Bumgardner told his wife to get his wheelchair so he could go home and get some pain medication. When Mrs. Bumgardner asked if he had been given pain medicine, Bumgardner responded no and then told her to "go tell that man or go tell somebody to come here and get this thing out of my arm." (Transcript at 74). As stated earlier, Dr. Ellis confirmed that Bumgardner requested "that we give him his pain medication, which we did just before he left." Id. at 426, 427. Dr. Ellis signed the 2/28/06 ER Resident Progress Note at 3/01/2006 at 00:22, or 12:22 a.m. (Joint Exhibit 1, Volume 3 VAMC Medical Record at 1658).

Dr. Ellis also spoke to Mrs. Bumgardner, to make sure that she was comfortable with taking her husband home, and she responded that she would "take care of him and call .. if she had any trouble with him." (Trial Transcript at 430). Bumgardner was released from the emergency room on March 1, 2006, at 12:30 a.m. (Joint Exhibit No. 1, VUMC Medical Record, p. 1655). On a scale of 1 to 5, Bumgardner rated his ER stay at "5" or excellent. Id.

The March 1, 2006 Fall

After the second February 28th visit, the Bumgardners returned home and the next morning, Mrs. Bumgardner left for work with Bumgardner in his bed. Bumgardner's mother was with Bumgardner that day. At some point, Bumgardner tried to stand up at the bedside to the use the urinal, but his legs became weak and he fell. (Joint Exhibit 1, Volume 6, Skyline Medical Discharge Summary at 3028). Bumgardner heard a "pop in his back" and had immediate bladder and bowel incontinence. (Joint Exhibit 1, Volume 6,Vanderbilt University Medical Center, Discharge Summary at 3226).

After his fall, Bumgardner was transported to Gateway Hospital emergency room and

later to Skyline Hospital where Dr. Vaughan Allen described Bumgardner as in "absolutely excruciating pain," that he rated "on a scale of one to ten, about a 15." (Transcript at 1096). After three and a half hours attempting to perform a myelogram, Bumgardner was placed under general anesthesia and transferred to Vanderbilt University Medical Center for a tracheostomy. On March 22, 2006, a PEG tube was inserted and on March 31, 2006, Bumgardner underwent T7-L2 posterior lumbar fusion surgery at Vanderbilt University Medical Center.

On April 14, 2006, Bumgardner was sent to the VA Spinal Cord Regional Center in Memphis for rehabilitation. Mrs. Bumgardner moved to Memphis to learn how to care for her husband. In Memphis, Bumgardner's health deteriorated with pneumonia (three times) and later E. coli that resulted in his placement in isolation. During the Memphis stay, Mrs. Bumgardner learned to use a lift to get her husband out of bed and into a chair; to clean his "trach"; to suction any fluid buildup for breathing; to turn him every two hours and to take care of his needs. At the end of July 2006, Mrs. Bumgardner returned to Clarksville to teach, but she visited Memphis on the weekends. During one of those weekend visits, she observed a black spot on Bumgardner's posterior that was described as "seaweed paste." (Transcript at 85-86). According to Mrs. Bumgardner, her husband was not treated for this "black spot." Id. at 86.

The VA physicians in Memphis explained that Bumgardner's condition would "most likely not get any better" and it was doubtful if Bumgardner would actually get out of bed. Bumgardner was to be placed on oxygen and a trach for the rest of his life. In September 2006, Bumgardner was transferred by ambulance to the VA Hospital in Murfreesboro. An initial examination revealed a large ulcer on Bumgardner's posterior, a stage IV bed sore that extended to Bumgardner's spine, the VA's Murfreesboro physician's prognosis was that Bumgardner

would be bedridden. Mrs. Bumgardner learned how to care for his bedsore from the wound nurse and Bumgardner gradually improved without any pain.

Mrs. Bumgardner built a house in Clarksville that was handicapped accessible and on February 27, 2007, Bumgardner returned home, almost one year after he became paralyzed. Bumgardner remained confined to bed, with a trach to breathe, and a catheter. Bumgardner needs assistance with everything and needs to be turned every two hours. (Transcript at 92, 93). A-Certive Home Health Care provided three visits a week to bathe Bumgardner. Id. at 93. The VA declined to provide daily cleaning of the trach or to clean him from a bowel movement. The Bumgardners hired a trainer for Mrs. Bumgardner to demonstrate how to change the inner canula in the trach, administer medications and take care of Bumgardner's personal needs. The VA therapist helps Bumgardner out of a bed and into a chair and a nurse changes Bumgardner's catheter as needed.

Plaintiffs note one episode when Bumgardner's tracheostomy closed in the fall of 2008 and Bumgardner's trach had to be cleaned seven or eight times a day. After removal of the trach, Bumgardner could breathe normally, but needed continued care for his bedsore. After Mr. Bumgardner returned home on February 27, 2007, his goal was to sit at the family table at Thanksgiving dinner, but could not do so until Christmas 2007 due to his bedsore. Despite some healing, Bumgardner's bedsore remains a Stage IV bedsore.

Mrs. Bumgardner had medical insurance through the Mailhandlers Benefit Plan Fund ("Mailhandlers") that covered some of Bumgardner's expenses. Since March 1, 2006, $1,158,388.66 in incurred medical expenses has been submitted to Mailhandlers, that has paid $786,272 of those expenses. (Plaintiffs' Exhibit 2, Stipulation No. 2). The Bumgardners paid

$39,650 to make their home accessible and suitable for Mr. Bumgardner's physical disabilities. (Plaintiffs' Exhibit 2, Stipulation No. 3, Plaintiffs' Exhibit 9). The Bumgardners also paid $14,500 to purchase a van with a lift to be able to transport Bumgardner and paid $850 to move the lift to the rear of the van so that Bumgardner could use it. (Plaintiffs' Exhibit 2, Stipulation No. 4). The Bumgardners paid a total of $23,952.81 since February 2007 to have help in their home, to turn Bumgardner, suction him when he had a trach, monitor his medications, empty his urine bag, and help him with his other needs. (Plaintiffs' Exhibit 27) (listing payments by Bumgardners).

Plaintiffs' Credibility Challenges

Plaintiffs make a series of credibility challenges of the VA physicians who treated Bumgardner on February 14, 21, and 28, 2006 as to their treatment, review of medical records and omissions in their treatment of Bumgardner.

Dr. Murff's Credibility

Plaintiffs first challenge Dr. Murff's credibility that on Bumgardner's first visit on February 28, 2006, Bumgardner told her his back pain was improved. Plaintiffs cite the nurse's February 28th progress note that Bumgardner's chief complaint was "Cont. c/o pain in mid back and abd. States pain has gotten worse since his last visit" and that Bumgardner "[r]eturns today with continued soreness in its mid-axillary region and across upper abdomen, esp RUQ." (Joint Exhibit 1, Volume 3, 2/26/05 Nurse Screening Progress Note at 1667, 1673). Dr. Murff's notation on the February 28, 2006 medical record is that "Pt states soem [sic] releif [sic] with MS Cotnin as for pain, but now has no BM since 2-13." Id. at 1663. At trial, Dr. Murff admitted access to the nurse's note explained:

"I think it's hard to tell whether he's talking about the abdominal pain or the back pain. To my history, he told me that his abdominal pain had - - he has now new abdominal pain, and that his back pain had improved. I can just testify to what he told me, sir."

(Transcript at 554-555).

Dr. Ellis' Credibility

In treating Mr. Bumgardner, Dr. Ellis did not read the ER nurse's assessment/progress notes for February 14th, 21st and February 28th. (Transcript at 436-37). Plaintiffs insist that despite the fact that Bumgardner's spine was not neurologically evaluated by him, Dr. Ellis testified that "his neurological exam was grossly intact. So I agreed with all those findings." (Transcript at 424). In testifying about Mr. Bumgardner's back pain, Dr. Ellis explained that:

A. Well, again, it would have depended on the findings of my neurological exam. I think I mentioned that the other day, that his chronic pain is going to be worse some days, better some days, depending on the situation in which he presents and the associated complaints. It might target you toward a more focused neurological exam. I think our basic neurological exam was reassuring when he was in the emergency room on the 28th.

(Transcript at 1066, 1067).

Dr. Well's resident progress note does reflect: "NEURO: cn ii-xii, grossly intact." (Joint Exhibit 1, Volume 3, 2/28/06 ER Resident Progress Note at 1657). Yet, Plaintiffs note that this neurological examination of Dr. Ellis and Dr. Wells of Bumgardner related only to his cranial nerves. Dr. Ellis testified that he "checked out [Bumgardner's] head and neck exam, similar to Dr. Wells. ..." (Transcript at 425). Plaintiffs cited Dr. Wells's and Dr. Ellis's failure to perform any neurological examination and to evaluate Bumgardner's thoracic spine. Id. at 410. Yet, Dr. Ellis further testified as follows:

Q. Dr. Ellis, just this question. If Mr. Bumgardner had reported to you on February 28, 2006 that he had increased pain which worsened since the last visit

of the 21st, would the standard of care applied to you at that time require that you order a consult, do neurological exams, and do a CT or MRI?

A. Well, we did do a neurological exam. And there was nothing there to indicate that further work-up was needed at that time.

Id. at 1069.

Plaintiffs challenges this testimony as lacking credibility because Dr. Ellis knew the neurological examination on Bumgardner on the second February 28, 2006 visit related only to Bumgardner's cranial nerves, not his spine. Id. at 410, 425. Plaintiffs also cite the following exchange.

Q. There was no neurological evaluation of his thoracic spine, was there?

A. What - I am not sure I understand

Q. From the records

A. What is a neurologic exam of the thoracic spine?

Q. I don't know. Whatever you do in neurological exams in testing the thoracic spine.

A. There really wasn't any nervous manifestations of a thoracic nerve problem other than pain, shooting pain, I suppose.

Id. at 1070.

Plaintiffs next challenges Dr. Ellis' credibility on the extent of his review of Bumgardner's medical file:

Q. The questions, Doctor, are simply to you, relative to your treatment of February 28. Were you aware in your - - well, first of all, does the standard of care applied to you on that date as one of the treating physicians require that you be aware of the prior medical records on the patient?

A. Yeah, as best you can.

Q. Sure. And did you review the note - - excuse me, and this is located at p

1667. I will show it to you. Doctor, I will put it up.

Id. at 1071. Counsel referred to Dr. Ellis to the 2/28/06 Nurse Screening Progress Note (Joint Exhibit 1, Volume 3 at 1667) that reads: "CHIEF COMPLAINT: c/o pain in his mid back and abd. States the pain has gotten worse since his last visit." Dr. Ellis then responded as follows:

> Q. My next question, Doctor, is, had you been aware of that [the information on p. 1667], do you believe the standard of care would have required you to be aware of it as sort of a red flag and done a more thorough examination that night?
>
> A. I am not sure how to answer that.
>
> Q. Well, had you received the information that his pain had gotten worse, would you have done anything about further evaluating that problem, to the worsening pain.
>
> A. I understand. The situation I was in, the patient had already been evaluated by Dr. Murff. I'm looking at her note on 1670, that she has: Back pain: neurologic exam done, intact, has a known prior compression fracture in the mid-thoracic spine consistent with his symptoms, not a new fracture. …

(Transcript at 1073, 1074).

Plaintiffs next cite Dr. Ellis's testimony referring to his reliance, in part, on Dr. Murff's February 21st assessment when Bumgardner complaining of continued and worsened mid-back and abdomen pain, (Joint Exhibit 1, Volume 3, 2/21/06 Clinic Visit Progress Note at p. 1670), as not requiring further evaluation. Dr. Ellis's cited testimony on this progress note is as follows:

> Q. My only question was, had you seen this, that patient - - would the standard of care, if you had seen that, have required you to have evaluated his complaint of worsening pain?
>
> A. Yes, and it was evaluated.
>
> Q. His back pain was evaluated?
>
> A. By Dr. Murff, I believe - - this is all from her note, but yes.
>
> Q. Well, just, if you would, look at the record and see in what fashion Dr.

Murff re-evaluated Mr. Bumgardner's worsening back pain.

A. There was an extremity examination. It says strength 5/5, typically mear s motor strength is intact in his extremities. I don't see anything else written here specifically, as you said, palpating the spine. But then in her assessment and plan at the end of that, it states, that, you know, this is consistent with his known compression fracture and chronic pain.

Q. So do I understand that there is nothing in the record when you saw it in your capacity that night, that showed that it was - - that the back pain was evaluated or checked out during the course of the day by Dr. Murff?

A. No, I just said it was.

(Transcript at 1074, 1075).

In Plaintiffs' view, Dr. Ellis left an incorrect impression that Dr. Murff actually conducted a neurological examination on Bumgardner's back after Bumgardner complained to the ER Nurse of his mid-back and abdominal pain that had gotten worse since the February 21, 2006 visit. Plaintiffs note that Dr. Murff's cited examination was actually performed on February 21, 2006 (Exhibit 1, Volume 3, 2/21/06 Clinic Visit Progress Note, p. 1668-1670) and Dr. Wells testified that he had not reviewed Dr. Murff's February 21, 2006 Clinic Visit Progress Note about Bumgardner's complaintis of pain from the back to the front when he treated Bumgardner on February 28, 2006. (Transcript at 436-37). Yet, Dr. Murff did testify that her examination of Bumgardner for rectal tone was a neurological examination because if Bumgardner had a spinal fracture he would not have rectal tone.

In the Court's perspective, the probative value of these cited credibility challenges turns on the expert proof on the appropriate standard of care for Bumgardner's various complaints and the cause(s) of Bumgardner's paralysis.

5. Standards of Care

In summary, Plaintiffs contend that Bumgardner's history of AS and continuing complaints of back pain were obvious indicators of an occult spinal fracture that in fact first occurred on February 14th, and, in the course of events worsened to a complete fracture and the resulting paralysis that occurred on March 1st. Plaintiffs assert that the recognized standard of medical practice in Nashville in February 2006 for emergency room physicians and internists required consultation with an orthopedic spine specialist or neurosurgeon for an AS patient. Plaintiffs assert that Drs. Shealey, Murff, Wells and Ellis lacked the medical knowledge of Bumgardner's AS and resulting serious risk of an occult spinal fracture that could result in a catastrophic injury to his spine, and that an x-ray would not exclude the presence of a thoracic vertebral fracture in an AS patient such as Bumgardner. Plaintiffs also assert that the standard of acceptable care for internists and emergency room physicians also required them to perform a full neurological examination, with a CT scan or MRI after Bumgardner presented persistent symptoms of unresolved back pain that at times radiated from his midback to the front of the chest and abdomen, with increasing pain upon bending as well as leg weakness, such as the February 28th fall. In addition, with Bumgardner's documented history, Plaintiffs contend that Bumgardner should have been hospitalized for evaluation and pain control as it was foreseeable that Bumgardner was at extreme risk of falling and sustaining a very serious spine injury.

As to other specific omissions, Plaintiffs cite Dr. Shealey's failure to review the 2/14/06 ER Nursing Assessment Progress Note prior to treating Bumgardner. Plaintiffs allege Dr. Murff also did not read the nurses's notes and lacked a plan to monitor Bumgardner with appropriate follow-up action if his back condition worsened or if he continued to have symptoms of an undiagnosed thoracic spine fracture. Plaintiffs argue that Dr. Murff failed to perform a

neurological examination to evaluate Bumgardner's back on February 28, 2006 at a time when the medical records established his back pain had worsened. On February 28th, Dr. Murff did not reassess her earlier differential diagnosis despite Bumgardner's worsening and persisting back pain and the nurse's February 28th progress note. (Joint Exhibit 1, Volume 3 at 1607). Dr. Murff did not hospitalize Bumgardner for pain control and evaluation after his two falls and his clearly foreseeable extreme risk for falling and suffering additional, serious back injuries.

Plaintiffs further contend that Drs. Wells and Ellis also did not conduct a neurological examination to evaluate Bumgardner's back on February 28, 2006 nor did they review all of Bumgardner's pertinent medical records in treating him. With Dr. Ellis's assessment that Bumgardner did not require hospitalization, Dr. Ellis created a clearly foreseeable and extreme risk of serious back injury.

1. Plaintiff's Experts

Plaintiffs' expert witnesses are: Dr. John Daniels, board-certified in internal medicine, endocrinology, and metabolism from the Washington University School of Medicine, St. Louis, Missouri; Dr. Stephen Natelson, a neurologist from Knoxville; and Dr. Chad Holder, a radiologist from Atlanta, Georgia.

Dr. Daniels testified that in sum, Bumgardner had an occult fracture on February 14, 2006, and that if he had received medical care consistent with the standard of care, his nondisplaced fracture at T9, T10 would have been diagnosed, surgery would have been performed on his spine and he would not have suffered the injury to his spinal cord that caused permanent paralysis. (Transcript at 133, 134, 261-62). Dr. Daniels explained that patients with AS "are very prone to vertebral fractures," and susceptible to spinal cord compression with a

minor fracture progressing over time to an unstable fracture of the x-rays spine do not include "the possibility of a nondisplaced vertebral fracture" that is untreated can result in paralysis. Id. at 125. In Dr. Daniels' opinion, with AS patients, it is well known that it is difficult to diagnose a vertebral fracture on initial presentation. Id. at 255. X-rays will not exclude the possibility of a nondisplaced vertebral fracture, which is called an occult fracture. Id. Dr. Daniels testified that 58.8 percent of missed fractures are caused by insufficient imaging; if another imaging had been added to the patient's radiographic investigation, the spinal injury would likely not have been missed. Id. at 296-297. Dr. Daniels reports that for an occult or hidden fracture, medical literature reflects 19.6 days can accrue before spinal instability. Id. at 119-120, 122 and 133. In sum, Dr. Daniels's opinion was that:

> Bumgardner had classic symptoms of vertebra. Fracture, including: (1) increasing pain in his mid-back since the February 14, 2006 fall; (2) leg weakness as evidenced by a history of falling at least twice in two weeks, and nearly falling on another occasion; (3) the failure of the pain from the February 14, 2006 fall to resolve or improve; and (4) radicular pain from his back radiating around the abdomen.

(Docket Entry No. 234 at 132).

As to the specific facts for this opinion, Dr. Daniels considered Bumgardner's report of a level 9 pain on February 14th as a "red flag that an [AS] patient has a new vertebrate fracture". Id. at 126. Dr. Daniels initially deemed the February 14, 2006 x-ray to be of "poor quality" and "did not visualize vertebrae above the T11/T12 vertebrae," and that the T9 area of Bumgardner's March 1, 2006 fracture "wasn't even visible on those x-rays." Id. at 139. Thus, Dr. Daniels opined that the February 14, 2006 x-rays were inadequate to rule out a fracture on February 14, 2006, because they did not show the plaintiff's back above the T11/T12 area. Yet, Dr. Daniels later admitted that he had not reviewed all of the February 14, 2006, x-rays and had only seen the

lumbar series. Id. at 140. After review of all the x-rays on February 14, 2006, Dr. Daniels admitted the x-rays clearly displayed the T9-T10 area and did not reveal a new fracture. Id. at 140-41. Dr. Daniels admitted that the VA physician satisfied the standard of care on February 14th. Id. at 144, 145, 147.

Dr. Daniels also opined Dr. Murff breached the standard of care on February 21 and February 28, 2006, when she "failed to do a thorough neurological work up or order a CT scan," and "failed to eliminate the possibility that Mr. Bumgardner had a new and undiagnosed fracture." Id. at 129, 132, 136. Bumgardner's fall was another symptom of a fracture. Id. at 130. On February 21st and 28th, Dr. Daniels testified that "Bumgardner had classic symptoms of new vertebra fracture at T10." Id. at 135. In Dr. Daniels opinion, such studies were necessary to detect an undiagnosed fracture, given Bumgardner's intense back pain of "nine on a scale of ten" as well as his reported abdominal pain. Id. at 131-132.

Dr. Daniels, however, read only the portions of Drs. Murff, Shealey, and Ellis' deposition provided by Bumgardner's counsel. Id. at 142, 145, 147. Dr. Daniels acknowledged that Bumgardner told Dr. Murff that his pain was "no greater than normal," and conceded that a rectal exam "can be" a neurological examination. Id. at 156. Dr. Daniels agreed that Bumgardner's constipation was caused by his pain medications. In his written report, Dr. Daniels cited Bumgardner's loss of "the use of his legs" before his March 1, 2006 fall, but at trial conceded that Bumgardner's ability to get on the examining table on February 28, 2006 and his initial standing prior to his fall on March 1, 2006 reflect Bumgardner's ability to stand. Id. at 135, 152. Significantly, Dr. Daniels also opined that "the substandard care also [was] the direct cause of Bumgardner's subsequent bedsores. Bedsores commonly occur over pressure points in

individuals who are unable to move and who are pressures placed on pressure points." (Transcript at 134).

b. Dr. Natelson

Dr. Natelson, a neurosurgeon, opined that "the standard of care required that good quality x-rays be obtained prior to ruling out a new thoracic fracture on February 14, 2006," and that the February 14, 2006 x-rays "were unsatisfactory for diagnostic purposes." Dr. Natelson opined that the standard of care required more than just "good quality x-rays," and a CT scan or MRI were necessary to rule out a new fracture. Dr. Natelson explained that x-rays "will not exclude the possibility of a nondisplaced vertebra fracture," or "occult fractures." Id. at 255. Dr. Natelson noted that Bumgardner's pain on February 14, 2006, was "more severe than had been previously documented in his medical records." Id. at 257. Dr. Natelson also opined that "[e]mergency room physicians lack the experience and training to manage such cases without a consultation from a neurosurgeon or orthopedic spine specialist," Id. at 257, and that "[e]mergency room physicians and internists do not have the knowledge or training to manage these serious cases by themselves." Id. at 260.

In sum, Dr. Natelson's opinion is that the VA doctors "did not consider" the possibility of an undiagnosed fracture "in their differential diagnosis." Yet, Dr. Natelson's opinion failed to consider the evidence that Dr. Stephenson, the Vanderbilt radiologist read the comparison x-rays at Dr. Murff's request and concluded that there was no new fracture on February 14, 2006.

c. Dr. Holder

Dr. Chad Holder is a neuroradiologist who has practiced in Atlanta, Georgia since 1997. An area of focus within his practice is treatment of the human spine. Based upon a reasonable

degree of medical certainty, Dr. Holder opined that it was more likely than not that Bumgardner had an occult fracture at the T9, T10 level of his thoracic spine on February 14, 2006 given Bumgardner's symptomology. This occult fracture may not be seen on plain films and an AS patient may not have any neurological deficits at the time of the fracture. (Transcript at 298). In Dr. Holder's opinion, a CT or MRI "would have been more likely to determine whether or not a new occult fracture was present in Bumgardner's thoracic spine on February 14, 2006." Id. at 292. Medical literature demonstrates that untreated occult fractures can become displaced and can result in paralysis. Id. at 293. According to Dr. Holder, an occult fracture with trabecular microfractures progressively weakens the bone. Id. at 295.

Dr. Holder described Bumgardner's March 1, 2006 fracture as a complete or chance fracture or banana fracture. Id. at 307, 308. Dr. Holder defined a banana fracture as follows:

> "...That would be a horizontal - a fracture with a relatively horizontal plane that occurs similar to peeling a banana and then just snapping it in half. And if you have done that before, it breaks off with a pretty clean - horizontal margin relatively because of - - and it's a descriptive term that has been used in patients with ankylosing spondylitis as well as in some other similar conditions like dish or diffuse idiopathic skeletal hyperostosis, which is another condition where the spine can partially fuse. And it's just related to the fact that it is a brittle spine and doesn't have the flexibility of the discs that a normal spine has. So you can, with a long lever arm, mechanically you can snap the spine, and it is a relatively shear injury."

(Transcript at 306, 307).[3] Dr. Holder explained that the complete fracture on the March, 2006

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[3]Dr. Vaughan Allen, a neurosurgeon agreed with Dr. Holder that Bumgardner had a classic fracture with T9, T10 fracture shown on March, 2006 films:

> "That's a classical fracture that we see with ankylosing spondylitis. It's - - the entire spine is calcified. Unlike other types of fractures, when this breaks, you have - - we call it the bamboo spine. It's almost like breaking a piece of a stick in half where the top part goes in one direction, the bottom goes another direction and you end up with severe spinal cord damage. And that would be the classic

films of Bumgardner's spine was "a classic type fracture" that occurs in patients such as Mr. Bumgardner who suffer from AS. Id. at 292.

Dr. Holder opines that the weakness caused by the occult fracture on February 14th ultimately progressed into the March 1, 2006, complete fracture and paralysis. Id. at 301- 302. Dr. Holder's review of the March, 2006 CT scans and MRIs shows damage to Bumgardner's thoracic spine at T9, T10 that is consistent with an occult fracture that occurred from a February 14, 2006 fall and progressed to paralysis on March 1, 2006. (Transcript at 302, 303). In sum, Dr. Holder shares the opinions of Dr. Natelson that Bumgardner had an occult fracture on February 14, 2006 that over time progressed to the March 1, 2006 complete fracture and his paralysis. (Transcript at 133, 134, 261- 262).

Dr. Holder disagreed with Dr. Brian Berger, whose opinions are discussed below, that it was impossible for Bumgardner to have suffered a fracture on February 14, 2006. In Dr. Holder's view, x-rays "are not sufficient to support such an opinion as articulated by Dr. Berger within a reasonable degree of medical certainty." Id. at 292-293. Yet, Dr. Berger's actual opinion was that if Bumgardner had a fracture on February 14, 2006, then the March 2, 2006 CT films from Skyline Hospital would look entirely different. Dr. Holder also did not consider the Vanderbilt radiologist's comparison of the February 14, 2006 and the April 2005 x-rays to reveal any difference, as Dr. Berger opined.

Defendants Experts

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picture you would see with this."

(Transcript at p. 1089). Dr. Joseph Cheng, who performed spinal fusion surgery on Bumgardner after his March 1, 2006 fall, characterized Bumgardner's March 1st fracture as a Chance fracture. (Exhibit 1, Volume 6, Operative Report 2006/03/31 at 3231-3233).

Defendant's experts are: Dr. Brian Berger, a board certified radiologist, Dr. Michael Kaminski, a board-certified Nashville neurologist; Dr. Gray Stahlman, a board certified Nashville orthopedic surgeon; and Dr. David Knapp, a Board-certified Nashville rheumatologist.

a. Dr. Berger

Dr. Brian Berger is a board-certified Nashville radiologist[4] with a sub-speciality in neuroradiology involving CAT scans of the body and head. From his review of Bumgardner's medical records, Dr. Berger opined that the February 14, 2006 and April 2005 x-rays of Bumgardner's thoracic and lumbar spine collectively provided good visualization of his spine from T4 to S1 and Bumgardner did not have a fracture at T4 through T10. Dr. Berger measured density adjustments in viewing digital images to improve the visualization of the region of the old fracture at T11-12 and the area of the suspected new fracture at T9-10. Dr. Berger noted the spacing of the T9/T10 vertebral bodies on the February 14, 2006 x-ray are identical to those on Bumgardner's April 11, 2005 x-ray. In Dr. Berger's experience, with the two x-rays, a hospital would not have taken further tests for any possible fracture.

In addition, Dr. Berger explained that Bumgardner's Skyline CT and myelogram revealed a combination of a hyperflexion and hyperextension that created a "new T10 superior vertebrate compression fracture." (Transcript at 702, 706). This was a flexion injury or a compression fracture of the superior end plate of T10. In Dr. Berger's opinion, Bumgardner also suffered a severe hyperextension injury with the severe widening and "gross change and increase in the measured widening of the T9-T10 interspace and widening of the facet fracture site" that show a

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[4]Dr. Daniels referred to Dr. Berger as an "excellent radiologist," who perhaps is "the best in the world." (Transcript at 146).

fracture that occurred with the March 1st fall. Id. at 706, 707, 709-710. Dr. Berger found the March 1, 2006 CT to show a fracture through the gelatinous disc space and its adjacent ligaments that differs from a classic "chance fracture," that is a horizontal fracture through the trabecular bone of the vertebral body. Id. at 710. Dr. Berger also explained that the term "banana fracture" cited by Dr. Holder is "very unusual" as such fractures are associated more with long bones such as the femur or tibia. Id. at 718. In Dr. Berger's opinion, Bumgardner's fracture was through the gelatinous disc and the very thin facets that are too thin to sustain a prolonged two-week microfracture path. After comparing the VA x-rays, the VUMC chest x-ray and the Skyline myelogram and the CT scan, Dr. Berger opines that the "severe instability of this fracture complex" precludes any undetected fracture on February 14th. Id. at 707-08. The "cracking" or "crackling" Bumgardner heard after his February 14, 2006 fall is consistent with the chronic degenerative changes at the T11-T12 area of his spine, from his old fracture. Id. at 734, 746-749, 778. "The pseudoarthrosis and chronic fractures at T11-12 are more than enough to have caused pain, cracking sounds and aggravated spasm after the documented February 14, 2006 fall." Id. at 707.

If there were an undetected fracture on February 14th, then Dr. Berger opines that such a fracture would have widened the hyperextension fracture site and disc level and would not have caused the other hyperflex compression with fracture lines through the facets that involved different biomechanical forces. Id. at 707. In a word, Dr. Berger testified that "[i]f Mr. Bumgardner had an occult fracture on February 14, 2006, it is highly doubtful he could have made it through the same day and absurd that he could have made it two weeks, without displacing the supposed unseen T9-T10 fracture that the plaintiffs allege." (Transcript at 708).

Dr. Berger described the "pop" Bumgardner heard after his March 1, 2006 fall as an "immediate neurological compromise," that most likely was the fracture and ligamentous rupture, not the product of an old hidden fracture. In Dr. Berger's view, if Bumgardner had a "simple slide" to the floor on March 1st, that movement lacked sufficient force to produce his injury. Id. at 707. In Dr. Berger's view, the entirely different "pop" sound Bumgardner heard on his March 1, 2006, fall is consistent with the fracture and ligamentous rupture. Id. at 707-708.

Dr. Berger cited Dr. Holder's failure to consider the lack of change between the April 11, 2005 and February 14, 2006 x-ray films, explaining that "[c]omparison to old studies is considered one of the first steps in reading a radiology study. It is one of the first things a resident learns, always compare the new study against the older studies for change." Id. at 718-719. Dr. Berger explained that emergency room physicians "tend to do the tests first that will yield the greatest answer," and for the vast majority of patients, an x-ray will end the inquiry about a fracture.

In Dr. Berger's view, "[t]he biomechanics of the flexion and hyperextension injuries would not have allowed a partial injury to be occult or non-visualized on the initial films of 2/14/2006 when compared to the prior films of 4/15/2005." Id. p. 713. On cross-examination, Dr. Berger conceded that x-rays can miss an occult fracture, but with the earlier x-ray of Bumgardner, the physician' and radiologists comparison of the two x-rays were adequate. Id. at 780. Yet, Dr. Berger's review of the subsequent Skyline CT scan does not reveal a fracture that displaced over time that eliminated any fracture on the February 14th x-ray films. In sum, Dr. Berger stated: "The complex of the fall, the sound, the immediate injury, and these severe ligamentous and small fractures of facet are a one-time complex event, a sentinel event that

occurred together, not separated out over two weeks. And that's what this series of x-rays and the biomechanics show us." Id. at 755-56.

Dr. Berger also stated about the articles cited by Dr. Holder on delayed fractures that six out of seven patients' complete fracture occurred between three hours and three days. Id. at 711. Only one patient had a "burst vertebrate fracture after 22 days." Id. Dr. Berger also cited a more detailed article on AS that "promotes the use of carefully evaluated x-rays" for AS patients. Id. at 714.

Plaintiffs note that Dr. Berger admitted that if Bumgardner had a Chance fracture, his fracture will be partial and over time become complete. Id. at 738. Plaintiffs also contend that Dr. Berger's opinion on Bumgardner's fracture is fundamentally flawed because Dr. Berger assumes Bumgardner had ligaments and gelatinous material in his disc space. Id. at 737, 738, 739. Plaintiffs assert that Dr. Stahlman, another defense expert, testified Bumgardner lacked ligaments or gelatinous material because the AS had fused his spine by ossifying his ligaments and discs and turning them to bone. Id. at 851, 855, 857, and 924. Yet, the Court deems the software study utilized by Dr. Berger allows more accurate reading and that software shows no change in the disc or ligaments between the April 2005 and February 14, 2006 x-rays. Id. at 730, 731, 733.

3. Dr. Kaminski

Dr. Kaminski, who is board-certified in internal medicine and neurology, opined that patients with AS are "at risk of further injury with falls including spinal fractures and even possible neurological injury." Id. at 945. Dr. Kaminski, however, did not discern any neurological signs of a fracture on Bumgardner's spine from February 14, 2006, to February 28,

2006 that would have alerted the VA physicians. Id. at 948-950, 954, 995. In Dr. Kaminski's opinion, on February 14, 2006, Bumgardner lacked clinical symptoms of myelopathy or spinal cord compression, because he lacked sensory loss, specific new lower extremity weakness or sphincter dysfunction. Dr. Kaminski opines that Bumgardner's x-rays were adequate to rule out an acute fracture. In his practice, Dr. Kaminski also defers to radiologists to review x-ray films. Id. at 942, 999. Dr. Kaminski concluded that the standard of care was met on February 14, 2006. Id. at 945.

As to Bumgarnder's February 21, 2006 visit, Dr. Murff's finding of 5/5 strength in his limbs does not evince deficient sensory symptoms, and Bumgardner did not have new bladder dysfunction or other substantive features suggestive of myelopathy. In Dr. Kaminski's opinion, a rectal tone examination can evaluate possible spinal cord compromise because the innervation to the rectal sphincters come off below the T9-T10 area. (Transcript at 950-951). A normal sphincter and rectal tone is inconsistent with any spinal cord injury. Likewise, the 5/5 strength in Bumgardner's limbs, as found by Dr. Murff, is inconsistent with a spinal cord injury, particularly at the T9-T10 area. Dr. Kaminski opines that VA physicians met the standard of care on February 21, 2006.

As to Bumgardner's two visits to the VA on February 28, Dr. Kaminski did not discern any new neurological symptoms of spinal cord compression, but cited Bumgardner's chronic constipation, lack of a bowel movement, and dehydration that are not "a typical presentation for an acute spinal cord injury." Id. at 945-946. Dr. Kaminski noted Bumgardner's condition improved after the bowel movement in the morning and after receiving the fluids that evening. Bumgardner's chart did not reflect any new specific weakness in his legs, sensory complaints or

urinary retention.

Dr. Kaminski disagreed with Drs. Natelson and Daniels on whether Bumgardner had a new spinal fracture on February 14, 2006. Dr. Kaminski cites the imaging studies of the pre–existing old fracture at T11-T12, as well as his spinal deformity that are most likely the cause of his persistent pain symptoms. Id. at 946. Dr. Kaminski observed that Dr. Natelson statement that "Bumgardner lost the use of his legs before the March 1, 2006 fall" was unsubstantiated by the clinical records that did not document any objective leg weakness or signs of spinal cord compression before March 1, 2006. In fact, the medical records reflect Bumgardner's use of his legs.

In sum, Dr. Kaminiski opined to a reasonable degree of medical certainty, that the spinal fracture which resulted in Bumgardner's permanent paralysis occurred on March 1, 2006. Id. at 998. Dr. Kaminski described Bumgardner's March 1, 2006 fracture as a burst fracture. Id. at 946, 997. Dr. Kaminski testified about the need for imaging in some circumstances as follows:

> "...So our standard has been if the films are unchanged and there's no suggestive symptoms, to follow the patient. Now I believe if the patient's symptoms persist or new signs develop, I admitted in my deposition and would say to you [the Court] directly that then further imaging would be indicated because the patient isn't progressing the way you would expect them to."

(Transcript at 1005).

Dr. Kaminski also agreed that an occult fracture could escape detection by a plain x-ray, and that a CT or MRI would be "more sensitive than plain x-rays." Id. at 957. Yet, Dr. Kaminski stated that the comparison of the two films of Bumgardner's spine by VA physician and radiologist would be "substantial evidence that there was not a new fracture." Id. at 956. As to the radiating pain around Bumgardner's chest as a symptom of neurological deficit, Dr.

Kaminski explained such symptoms could also stem from other causes. Dr. Kaminski cites the notes of Drs. Murff and Ellis and the nurse's notes as reliable sources of information on the source of Bumgardner's pain. Id. at 976.

C. Dr. Stahlman

Dr. Stahlman, a board-certified orthopedic surgeon, has treated patients with neck and spinal problems in Nashville since 1996. After his review of Bumgarnder's record, Dr. Stahman found a long history of lower back pain from Bumgardner's AS and a remote history of a significant fracture at T11/12 that caused a significant deformity of his spine. Id. at 840. According to Dr. Stahman, the x-rays reveal that the T11/T12 fracture "happened many years ago because of the density of the bone," and the fusion of the bone at that area. Id. at 854. Dr. Stahlman also cited Bumgardner's history of falling and increasing weakness in his legs that resulted in his use of a walker and at times, a wheelchair. Id. at 840, 844.

After review of the radiological films, Dr. Stahlman did not discern a fracture at T9/10, nor did he find evidence of deformity. Bumgardner's disc space at T9/10 on February 8th measured the same as the April 2005 x-rays. Id. at 846. Dr. Stahlman agrees with Dr. Berger that the February 14, 2006 x-rays "are easily compared to those films done on April 11, 2005, and again show no evidence of interval change." Id. at 848-849. In Dr. Stahlman's opinion, Bumgardner did not have a fracture in his spine on February 14, 2006. Id. at 865. Yet, Dr. Stahlman acknowledged that radiating and/or worsening pain could be a neurological deficit that may evince instability of the spine. Dr. Stahlman did not review Bumgardner's Skyline medical records that Bumgardner had "rubbery legs sometime before the March 1, 2006 fall," id. at 978, 979, and viewed the VUMC medical record as "essentially a discharge summary from his

hospitalization and transfer from Skyline Medical Center." Id. at 892.

Dr. Stahlman explained that an orthopedic spine specialist "has a much higher index of suspicion of occult fracture in this setting." (Transcript at 850). Orthopedic spine specialists and neurologists possess this higher index of suspicion of an occult fracture because they have the critical medical knowledge, expertise and training to understand that an occult fracture could be present in Mr. Bumgardner's thoracic spine at T9, 10 and to treat that very serious condition by "clearing the spine," which merely involved ordering a MRI or a CT scan. In Dr. Stahlman opinion, Dr. Berger's description of Bumgardner's injury is accurate and opined that "it is highly unlikely that Mr. Bumgardner could have had such an unstable fracture pattern for two weeks," citing the marked worsening of the fracture displacement while Bumgardner was hospitalized and on bedrest with spinal precautions in place prior to his ultimate surgical stabilization. Id. at 849. Dr. Stahlman agreed with Dr. Berger's assessment of the biomechanics of Bumgardner's injury. Id. at 845, 852, 853.

As to Dr. Natelson's opinion that surgery to stabilize Mr. Bumgardner's back could have been performed by the VA years prior to the March 1st fall, Dr. Stahlman deemed Dr. Natelson's opinion "flawed, as it assumes that the dramatically unstable chance fracture that Mr. Bumgardner ultimately suffered was present at his initial presentation. There was no evidence from examination or from imaging to support this assertion." Id. at 848.

As to Bumgardner's signs of neurological compromise, Dr. Stahlman noted that Bumgardner "clearly had a history of chronic constipation," given his increased doses of his narcotics, as well as "additional and stronger narcotic pain medications which notoriously can cause constipation." After Bumgardner was relieved with enemas, he felt better. In Dr.

Stahlman's experience, urinary retention and constipation "is rarely associated with neurological compromise," because "the more classic findings are bowel or bladder incontinence such as [Bumgardner] presented with after his injury on March 1, 2006." Id. at 849-850. As to Bumgardner's February 28, 2006 visit, Dr. Stahlman noted Bumgardner's abdominal pain due to constipation caused his visit, not his back pain. Id. at 900. Given his morbid obesity and imbalance in his spine due to his old fracture, Bumgardner is "not balanced straight up and down and he would tend to tip forward. He has a history of falls prior to the 14th. All of those things [that] patients with a chronic compression fracture like he had with the substantial alignment abnormalities that he had at T11-12, could give him back pain as well." Id. at 918.

As to the March 1, 2006 "pop," Dr. Stahlman cited that "most likely was the front structures breaking away during the extension," that "came from the fractures of the posterior elements, the facet joints in the back." Id. at 851, 859, 860. If an occult fracture at the T9-T10 area existed on February 14, 2006 that had not been displaced, "typically we would see widening of the residual disc space" that had become calcified, and widening in the anterior part. Id. at 860-861. In other words, a "wedging of the bone and perhaps some splaying of the disc space." Id. at 866. The splaying of the disc space between T9-T10 "was quite wide" on the March CT scan, compared to the x-rays of February 14, 2006 and April 2005. In Dr. Stahlman's experience, with this extension mechanism, this type of fracture would be seen on the February 14, 2006 films if the fracture actually occurred at that time. Dr. Stahlman analyzed this type of fracture as similar to a brittle twig that snaps, rather than one that would slowly change over time. Id. at 930.

Significantly, with imaging software, Dr. Stahlman measured the space between the

bottom of the bone at T9 and the top of the bone at T10 and found that the April 2005 and February 14, 2006 x-rays "are identical," reflecting "no disruption of that disc space." Id. at 862. With "absolutely no changes" between the two films, Dr. Stahlman opines that a fracture could not exist. Id. at 866. In Dr. Stahlman's opinion, "a new fracture is not the exclusive reason why somebody could have back pain after a fall." Id. at 875. In sum, Dr. Stahlman opined that Bumgardner's fracture and subsequent catastrophic paralysis was associated with his March 1, 2006 fall.

D. Dr. Knapp

Dr. Knapp, a rheumatologist in the Nashville area for over 30 years, treats AS patients. After his review of the VA medical records Dr. Knapp did not find that at any time in February 2006, Bumgardner had "a radical change in the nature and quality of [his] pain," or that would "be inconsistent with the fall and possible exacerbation of a preexisting pain or a plain strain type injury." Id. at 1030, 1033. As to the failure to perform of CT scan or MRI during his February 14th visit and subsequent VA visits, Dr. Knapp did not find these tests to be supported by the objective medical records within a reasonable degree of medical certainty. Dr. Knapp disagrees with Dr. Daniels' statement that the failure to obtain additional imaging on February 21, 2006, was substandard, opining that the clinical circumstances had not sufficiently changed to require further imaging studies on that date. In Dr. Knapp's opinion, Dr. Natelson's theory of the "incomplete injury" that "subsequently broke" is unsupported by the objective medical evidence and the films as interpreted by Dr. Berger. Id. at 1019.

Dr. Knapp disagrees with Dr. Daniels' "generalization" that a "crackling" sound is a "classic" sign of a vertebral fracture. In Dr. Knapp's experience, AS patients could be expected

to experience crepitus in the spinal region due to heavy calcification of spinal ligaments and other spinal elements. Id. at 1016-1017. Dr. Knapp opines that any fracture significant to produce the sound of bone fragments rubbing on each other, as Dr. Daniels suggests, would be evident on plain x-rays. In Dr. Knapp's view, Bumgardner's expert references to "absolute statements" in highly specialized radiology and orthopedic tests and journals are outside of the expertise and professional skills of the attending VA physicians. These tests and articles are inappropriate measures of the community standard of care expected of these VA physicians and are more appropriate for specialists in radiology and spine surgery." Id. at 1020-1021.

Yet, Dr. Knapp testified that if Mr. Bumgardner presented two weeks after the fall with complaints of worse pain, a complete neurological examination was mandatory. (Transcript at 1053). As to attribution of complaints of abdominal and chest pain to a proposed vertebral fracture with associated neural damage, Dr. Knapp responds that such statements are "conjectural and reverse engineering given the multiple medical comorbidities the claimant is documented to have that could be responsible for these complaints, including an increase in opioid use and/or an acute intra-abdominal process in an immuno-compromised patient on steroids and other medications that can lower resistance to infection." Id. at 1019.

Damages

Dr. Thomas Groomes of the Stalworth Rehabilitative Center at Vanderbilt University, and Tara Mulderig, a nurse with Care Management Consultants, described the life care plan options for Bumgardner at home or in an appropriate facility. The average cost per year at home was $141,806.24, and the average cost at a facility was $163,371.24. Dr. Groomes assumed a life expectancy of 11.59 years that was rounded to 12 years for his calculations to result in a total

of $1,701,674.88 for home care and $1,960,454.88 for facility care. With 11.59 years, the totals would be $1,643,534.32 for home care and $1,893,472.67 for facility care. Neither Dr. Groomes nor Mulderig considered that Bumgardner, as a veteran, is entitled to lifetime care by the VA nor did they account for Bumgardner's Medicare benefits.

The VA has provided in-home health care to Bumgardner since March 2007 under contract with A-Certive Home Health Care. There services include nursing services with catheter changes and any other care every eight to ten days, and home health aide who provides bathing, dressing, other hygiene needs, transfers to his chair, and bed linen changing, three times per week. Earlier, physical therapy was also provided. Id. at 830-831. The VA pays for all of A-Certive's services and any doctor approved care. The VA has paid A-Certive Home Health Care and other outside health care providers $11,953.19 in 2007 and $11,059.68 in 2008, and $5,265.00 in 2009 through July 10th.

B. Conclusions of Law

Under the FTCA, an injured person can file an action against the United States for the negligent acts or omissions of a government employee acting within the scope of his or her official duties. 28 U.S.C. §§ 2674 and 2679(b)(1). See also Ward v. United States, 838 F.2d 182, 184 (6th Cir. 1988); Hinson v. NASA, 14 F.3d 1143, 1147 (6th Cir. 1994). Here, the parties stipulated that the physicians who treated Mr. Bumgardner at the Nashville VA Hospital from February 14, 2006 through March 1, 2006 are employees of the United States Government within the definition of 28 U.S.C. § 2671. The parties further agree that a physician-patient relationship existed between Bumgardner and each physician who treated him when he was at the Nashville VA Hospital from February 14, 2006 to March 1, 2006. (Plaintiffs' Exhibit 2, Stipulations No. 6

and 7).

For tort claims, the FTCA applies the substantive state law where the alleged tort occurred Ward, 838 F.2d at 184. Tennessee's Medical Malpractice Act, Tenn. Code Ann. §§ 29-26-115-20, "codifies the common law elements of negligence--duty, breach of duty, causation, proximate cause, and damages." Kilpatrick v. Bryant, 868 S.W.2d 594, 598 (Tenn. 1993), citing Tenn. Code Ann. § 29-26-115(a). For an action under Tennessee's Medical Malpractice Act:

> [T]he plaintiff in a medical malpractice case has the burden of proving the following:
>
> (1) **The recognized standard of acceptable professional practice in the profession and the specialty thereof**, if any, that the defendant practices in the community in which he practices or in a similar community at the time the alleged injury or wrongful action occurred;
>
> (2) That the defendant acted with less than or failed to act with ordinary and reasonable care in accordance with such standard; and
>
> (3) As a proximate result of the defendant's negligent act or omission, the plaintiff suffered injuries which would not otherwise have occurred.

Id. at 597-98, quoting Tenn. Code Ann. § 29-26-115(a) (emphasis added).

Tennessee law creates a legal presumption that "a medical practitioner has discharged his full duty to a patient and [Tennessee courts] will not presume negligence from the fact that the treatment was unsuccessful." Watkins v. United States, 482 F. Supp. 1006, 1012 (M.D Tenn. 1980). As pertinent here, as stated in Akins v. Novinger, 322 F. Supp. 1205 (E.D. Tenn. 1970), the Tennessee law creates a special duty for general practitioners:

> [If a general practitioner] discovers that his patient's ailment is beyond "his knowledge or technical skill, or ability or capacity to treat with a likelihood of

> reasonable success" he is under a duty to disclose the situation to his patient "or advise him of the necessity of other or different treatment."

Id. at 1208 (quoting Osborne v. Frazor, 58 Tenn. App. 15, 25, 425 S.W.2d 768, 773 (1968)[5]). See also Jennings v. Case, 10 S.W.3d 625, 627 (Tenn. Ct. App. 1999).

Competent expert medical testimony is necessary to establish a doctor's breach of duty and that the doctor's conduct or omission was the proximate cause of the plaintiff's injury, "unless the alleged malpractice is within the common knowledge of laymen." Ayers v. Rutherford Hosp., 689 S.W.2d 155, 160 (Tenn. Ct. App. 1984). Absent this exception, Plaintiffs "must come forward. . .with expert opinion of the issues of negligence and proximate cause." Dolan v. Cunningham, 648 S.W.2d 652, 653 (Tenn. Ct. App. 1982). Under Tennessee law, the legal standard proof to a reasonable degree of medical certainty that the cited act or omission caused Plaintiffs' injury or "but for" causation. Kilpatrick, 868 S.W.2d at 598. Absent expert proof or matters within common knowledge of laymen, the plaintiff cannot sustain a judgment on his medical malpractice claim. Bowman v. Hennard, 547 S.W.2d 527, 530 (Tenn. 1977).

Yet, "injury alone does not raise a presumption of the defendant's negligence." Tenn. Code Ann. § 29-26-115(d). "An honest mistake in judgment is not sufficient to find a physician negligent." Ward, 838 F.2d at 187 (applying Tennessee law). Cause in fact is not proved when the injury would have occurred even if the conduct had not taken place. Waste Mgmt., Inc. of Tenn. v. South Central Bell Tel. Co., 15 S.W.3d 425, 430 (Tenn. Ct. App. 1997). This principle has come to be known as the "but for" test. Id. at 431. This test requires the plaintiff to

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[5] Osborne has been superceded by Tenn. Code Ann. §29-26-115, but only as to the burden of proof in a medical malpractice action. Crawford v. Family Vision Ctr., Inc., No. 01-A-01-9005-CV-00184, 1990 WL 17735, *2 (Tenn. Ct. App. Nov. 16, 1990).

introduce evidence that "affords a reasonable basis for the conclusion that it is more likely than not that the conduct of the defendant was a cause in fact of the result. A mere possibility of such causation is not enough. . . [.]" Miller v. Choo Choo Partners, L.P., 73 S.W.3d 897, 901 (Tenn. Ct. App. 2001). In Miller, the court clarified that "pure speculation or conjecture" could not be the basis for a cause in fact. Id.

In sum, to prove in-fact causation, Plaintiffs must show that their injuries were "more likely than not" caused by "the negligent actions of the defendant(s)." Volz v. Ledes, 895 S.W.2d 677, 679 (Tenn., 1995). In Kilpatrick, the Tennessee Supreme Court explained:

> [T]he rule requiring [that] causation be proven by a preponderance of the evidence dictates that Plaintiffs demonstrate that the negligence *more likely than not* caused the injury. Lindsey v. Miami Dev. Corp., 689 S.W.2d 856, 861 (Tenn. 1985) ("[p]laintiff must introduce evidence which affords a reasonable basis for the conclusion that it is more likely than not that the conduct of the defendant was a cause in fact of the result."). To be sure, the mere occurrence of an injury does not prove negligence, and an admittedly negligent act does not necessarily entail liability. Doe v. Linder Const., 845 S.W.2d 173, 181 (Tenn. 1992). Even when it is shown that the defendant breached a duty of care owed to the plaintiff, the plaintiff must still establish the requisite causal connection between the defendant's conduct and the plaintiff's injury. Id. ("Proof of negligence without proof of causation is nothing").

868 S.W.2d at 598-99.

As applied here as to the Defendant's agents' breaches of their duty, the Court evaluates each treatment of Bumgardner on February 14th, 21st and his two visits on February 28th. Plaintiffs contend that the VA physicians should not have relied upon only x-rays on February 14th, which could miss an occult fracture, and should have ordered an MRI or CT scan. To be sure, Defendants' experts agree that an occult fracture can be missed by a plain x-ray, but also agree that the comparison of April 2005 and February 14, 2006 x-rays were sufficient for the VA's physicians' assessment whether Bumgardner had a spinal fracture. Plaintiffs' experts

failed to consider that the VA physicians did not rely solely upon the February 14, 2006 x-rays, but compared the February 14, 2006 x-ray to the earlier April 2005 x-ray of Bumgardner spine. In addition, the VA physicians also relied upon a Vanderbilt radiologist who examined these x-rays on February 14th. Dr. Stephens, the Vanderbilt radiologist who compared these films, told Dr. Shealey that there was not any change on the condition of Bumgardner's spine. The Court notes that Plaintiffs' expert, Dr. Daniels, an internist, opined that VA physicians met the standard of care on Bumgardner's February 14, 2006 treatment.

As to Bumgardner's February 21, 2006 visit, Dr. Murff conducted two neurological examinations on that day, *i.e.*, the extremity test of Bumgardner, yielding a rating of "five" out of "five", meaning that Bumgardner was neurologically normal. Dr. Murff also conducted a rectal examination, a neurological test that revealed Bumgardner's rectal tone to be normal and inconsistent with any neurological impairment. Dr. Murff also explained that Bumgardner's narcotic medications for pain causes constipation. On February 21st, Bumgardner's complaint was "abdominal pain constipation," and weakness that he reported "much improved" after his first bowel movement since February 13th. Plaintiffs' expert Dr. Daniels testified that the T9 and T10 levels of the spine control bowel and bladder movements. Thus the bowel incontinence, such as Bumgardner immediately suffered after his fall on March 1st, is consistent with a new fracture.

Dr. Murff also reviewed the reports of the February 14, 2006 x-rays and the April 2005 x-rays, and concluded a new fracture was not present on February 14th. The persuasive expert proof regarding Bumgardner's pain was in the mid chest region and the cracking sounds are consistent with his prior fracture at T11/T12. Bumgardner was coherent, answered Dr. Murff's

questions and was not in acute distress. Bumgardner was able to get on and off the examining table with "minimal assistance." Id. at 514. The same factual scenario was present on Bumgardner's first visit on February 28th with Dr. Murff.

Based upon Bumgardner's prior medical history and treatment at the Nashville VA, his history of chronic pain and falls, the comparative analysis of the x-rays by a radiologist, Dr. Murff's neurological testings that were inconsistent with any neurological impairment, and Bumgardner's report that he was "much improved" after his bowel movement on February 21st and his first visit on February 28th, the Court concludes that these facts do not establish any breach of the duty by Dr. Murff to conduct further studies such as a MRI or CT scan nor to refer Bumgardner to a specialist at that point. Plaintiffs' theory of the case that x-rays were insufficient to rule out a new fracture and the symptoms Mr. Bumgardner exhibited during the two week period required a CT or MRI from February 14, 2006 fails to consider that the VA physicians had Bumgardner's extensive prior medical history and treatment. This prior treatment and tests including the April 2005 x-rays enabled the VA physicians to assess Bumgardner's condition on February 14th, after consultation with a VUMC radiologist. Without this prior history of treatment, tests and consultation, Plaintiffs' experts opinion that a CT or MRI would be the required standard of care could be persuasive.

As to Bumgardner's second visit of February 28th, Dr. Ellis observed Bumgardner getting out of his wheelchair, stand, and with some assistance get onto a stretcher and upon his examination, Dr. Ellis found Mr. Bumgardner "grossly intact" neurologically and not in severe pain. Bumgardner told Dr. Ellis that he "felt better" after receiving the fluids. Dr. Ellis reviewed the previous clinical notes that did not suggest a new fracture. Plaintiffs' experts opinions that

Bumgardner had "lost the use of his legs" by February 28, 2006, are contradicted by the medical records as well as Bumgardner's treating physicians.

Yet, the Court concludes that Bumgardner's AS condition, the nurse's rating of his second February 28th visit of Bumgardner's pain at a level of 9 that had worsened since his first February 28th visit, and the nurse's rating of his condition as "urgent" present a serious factual scenario warranting further testing or a neurological consultation, notwithstanding Bumgardner's comments. Thus, the Court concludes that Plaintiffs have demonstrated a breach of the VA's physician's duty on Bumgardner's second February 28th visit by failing to conduct further testing or to consult a neurologist. These physicians, however, did not breach any duty to hospitalize Bumgardner. Bumgardner was offered hospitalization on his second visit on February 28th, but declined. Yet, the issue remains of whether the physician's failure to obtain imaging studies on February 28th in fact caused Plaintiff Bumgardner's paralysis. As discussed below, the Court concludes that it did not.

On the issue of causation, the Court deems persuasive Dr. Berger's testimony that the VA x-rays, the myelogram, CT scan and the biomechanics of the fracture establish that this fracture occurred when Bumgardner fell on March 1st, and his fall was not an occult fracture that worsened over a two-week period. Plaintiffs' radiological expert, Dr. Holder, failed to rebut Dr. Berger's analysis of the biomechanics of Bumgardner's fracture. Dr. Stahlman's and Dr. Berger's opinions provide more objective medical analyses. Dr. Daniels conceded that he was "not a credible witness" on the subject of the biomechanics of the fracture that paralyzed Mr. Bumgardner and was not competent to comment on the CT scan. (Transcript p 150). Moreover, a common thread among the treating physicians and these experts is that Bumgardner had a

normal rectal tone that implicates the T9-T10 are of his spine and this normal tone is inconsistent with a neurological impairment of that area. Moreover, when Bumgardner fell on March 1st, an immediate effect was his bowel incontinence.

In sum, the Court concludes that the objective medical evidence establishes that the T9/T10 fracture, that caused Mr. Bumgardner's paraplegia occurred and was caused by his March 1, 2006 fall. Bumgardner's paralysis was not caused by the Defendant's agents cited acts or omissions on February 14, 21, and/or 28, 2006.

Yet, the undisputed expert proof here is that at the VA's Memphis facility, the Defendant's agents' lack of care caused Bumgardner to suffer a bed sores that degenerated into a Stage IV bed sores that caused a black spot on Bumgardner that ran to his spine and remained for almost a year. As to bed sores, there are distinct stages:

> [T]he classification of decubitus ulcers involves four stages. A Stage I ulcer is evident when the skin has persistent redness in a certain area caused by pressure, and the redness does not disappear within sixty minutes after the pressure has been released. Stage II is not clearly defined, and an ulcer may progress directly to Stage III. An ulcer is classified as Stage III when it breaks open to expose fat under the skin, and if bone or muscle is exposed, it is a Stage IV.

Convalescent Serv. Inc. v. Schultz, 921 S.W.2d 731, 734, n. 1 (Tex. Ct. App. 1996). A Stage IV bed sore can be "very painful." Rose Care, Inc. v. Ross, 209 S.W.3d 393, 402 (Ark. Ct. App. 2005).

State and federal courts, including Tennessee, have recognized damages claims against hospitals and care facilities whose negligence caused, inter alia, Stage IV bed sores. Smartt v. NHC Healthcare/McMinnville, LLC, No. M2007-02026-COA-RJ-CV, 2009 WL 482475 at *3-4 (Tenn. Ct. App. Feb. 24, 2009); Schultz, 921 S.W.2d at 734; LeMarca v. United States, 31 F. Supp. 2d 110 (E.D.N.Y. 1998). The Court of Appeals for Veteran Claims required a statement of

reasons for denying a claim for bed sores caused by the negligence of VA hospitals. Moore v. Nicholson, No. 04-21, 2005 WL 3312286 at *4 (Vet. App. Nov. 29, 2005). In Tennessee, such claims fall under the Tennessee Medical Malpractice Act, and Plaintiffs' proof must meet that Act's standards of proof. Estate of French v. The Stratford House, No. E2008-00539-COA-R3-CV, 2009 WL 211898 at **11 (Tenn. Ct. App. Jan. 29, 2009).

As the cases cited above demonstrate, the Defendant VA owed a duty to Plaintiffs to prevent Stage IV bedsores from developing during his hospital treatment. The failure to address bed sores and ulcers before they reach Stage IV can constitute a breach of that duty. Robinson v. Baptist-Memorial Hosp.-Lauderdale, No. W2006-01401-COA-R3-CV, 2007 WL 2318185 at *1,3 (Tenn. Ct. App. Aug. 15, 2007). As previously noted, Plaintiffs must also establish causation under Tennessee law.

Here, among his other opinions on Bumgardner's injuries, Dr. Daniels expressly addressed Bumgardner's bed sores: "the substandard care also [was] the direct cause of Bumgardner's subsequent bed sores. Bed sores commonly occur over pressure points in individuals who are unable to move and who are unable to sense pain from abnormal pressures placed on pressure points." (Transcript at 134). Bumgardner had to be turned almost every two hours, but clearly was not for a significant period of time. This Stage IV bed sore took almost a year to heal. Dr. Daniels's expert testimony undisputedly establishes the Defendant's agents' negligence or gross negligence in the lack of adequate care of Bumgardner at its Memphis facility during his rehabilitation period.

As to an award of damages, in Summer v. United States, 794 F. Supp. 1358 (M.D. Tenn. 1992), the Honorable John T. Nixon, District Judge, reviewed Tennessee decisions and defined

the general rule on an award of appropriate damages for these types of claims

> In a personal injury tort case, Tennessee law recognizes damages for bodily injury, pain and suffering, medical and other related expenses, loss of earning capacity, and permanent disability. Additionally, a plaintiff may recover for impairment of the enjoyment of life. The amounts should not only reflect suffering prior to trial but also the suffering the plaintiff will likely suffer afterward. In determining the amount of damages, a court should consider the nature and extent of the injuries, suffering, expenses, diminution of earning capacity, inflation, age expectancy of life, and the amounts awarded in similar cases.

Id. at 1369 (citations to Tennessee decisions omitted).

In Schultz, the jury awarded $380,000 for a hospital's gross negligence in failing to monitor the plaintiff there who suffered a Stage IV bed sore. Schultz, 921 S.W.2d at 733-34. In Robinson, 2007 WL 2318185 at *1, 3, the jury awarded $300,000 against a hospital for failing to follow through with therapy where the patient developed ulcers and sores on both heels that almost turned to gangrene.

The Court finds that given the egregious nature of Bumgardner's Stage IV bed sore during his rehabilitation at the defendant's facility in Memphis for almost a year, the Court awards Plaintiffs three hundred thousand dollars ($300,000) in damages.

An appropriate Order is filed herewith,

ENTERED this the 31st day of March, 2010.

WILLIAM J. HAYNES, JR.
United States District Judge